**COME!**

**Co**stal and **M**arine Sustainability **E**nacted

**Universiti Teknologi PETRONAS** & **Universiti Kuala Lumpur** (Malaysia), August 15-28, 2022

*The Summer School is organised under Erasmus+* *CBHE projects MARE ”Marine Coastal and Delta Sustainability for Southeast Asia” (https://mare-project.net)*

**Introduction**

The **COME!** summer school will be a vibrant mixture of interactive sessions, field trips, and group work in a unique setting, designed to give participants hands-on project and research experience with a range of issues related to marine, coastal and delta sustainability with a focus on novel and innovative approaches and methodologies. After an introductory day with an overall overview of sustainability challenges and the state of art in marine & coastal science, policy and management, during the week 1 the students will follow plenary sessions or one of parallel sessions normally exploring marine or coastal/delta issues. The second week will focus on interactions with stakeholders – business, public bodies and NGOs engaged in management & governance activities over marine and coastal resources. To support in-class learning, the educational process will include field excursions.

The School will start and finish in Seri Iskandar, the seat of the Universiti Teknologi PETRONAS; most of the stakeholder sessions (as well as supporting sessions by academic faculty) will be hold on the premises of Universiti Kuala Lumpur in Lumut. Bus transfers between Seri Iskandar and Lumut will be arranged by the organisers of the summer school.

We offer two educations tracks. The Track 1 includes the full course of two weeks and successful participants will receive a certificate of completion entailing 3 ECTS. The Track 2 of the **COME!** School includes only the week 1 (August 15-19, 2022); participants attending all the sessions and at least 2 hours of individual consultations with the School faculty will receive a certificate of completion worth 1.5 ECTS.

By the end of the School, all the participants enrolled to the Track 1 (individually or in small groups) will be expected to develop and present proposals for a practical solution for a real-life problem, or detailed paper proposals reflecting on their project experience and learning outcomes of the **COME!** School. Participants and faculty are encouraged to re-develop the final reports into academic papers or project applications.

The **COME!** summer school will be a valuable learning experience for everyone, but having a great time is also a summer essential. All the participants will be students or young experts, therefore we would like everyone to have a memorable time with us in Malaysia!

**Summer school faculty:**

Dr. **Holger Auel**, University of Bremen (Germany)

Dr. **Shamila Azman**, Universiti Teknologi Malaysia

Dr **Siti Nur Fathiyah**, Universiti Teknologi PETRONAS (Malaysia)

Dr. **Muhammad Hafeez Jeofry**, Universiti Malaysia Terengganu (Malaysia)

Dr. **Anne Kull**, Estonian University of Life Sciences (Estonia)

**Siiri Külm**, Estonian University of Life Sciences (Estonia)

**Lagle Lõhmus**, Estonian University of Life Sciences (Estonia)

Dr. **Vincenzo Maccarrone**, Institute for Marine Biological Resources and Biotechnology of the Italian National Research Lecture : Council – (IRBIM-CNR) (Italy)

Dr. **Teh Hee Min**, Universiti Teknologi PETRONAS (Malaysia)

Dr. **Igor Novopashenny**, University of Bremen (Germany)

Dr. **Yildiray Ogurol**, University of Bremen (Germany)

Dr. **Daniele La Rosa**, University of Catania (Italy)

Dr. **Pietro Scandura**, University of Catania (Italy)

Prof. **Kalev Sepp**, Estonian University of Life Sciences (Estonia)

Dr. **Anton Shkaruba**, Estonian University of Life Sciences (Estonia)

Dr. **Mohd Redzuan Zoolfakar**, Universiti Kuala Lumpur (Malaysia)

**Application process**

Details about the application procedure are available from <https://mare-project.net/index.php/2022/06/08/mareschool/>. The application deadline for those who needs visa in order to enter Malaysia is **June 18, 2022.** The deadline for all other categories of participants is **June 22, 2022.** The eligible applicants need to be students or graduates of degree programs explicitly dealing with the management or governance of marine, coastal or delta environments. Relevant professional experience can be considered as an equivalent of a relevant degree. The language of instruction is English, and therefore all the eligible applicants are required to possess demonstrable English language proficiency. The application form can be accessed from <https://forms.gle/JP4hFqaUGfCoxFSFA>

**Financial information**

Accommodation and meals shall be covered by participants; we are working on affordable solutions for the school; local transport will be arranged and covered by the university. All the relevant information will be available soon from the summer school www. The tuition fee won’t be charged. Other forms of financial assistance are not available.

**Contacts**

The Shool’s website is <https://mare-project.net/index.php/2022/06/08/mareschool/>. All the inquiries on the matters not covered by the website should be sent to Dr. Siti Nur Fathiyah, [fathiyah.jamaludin@utp.edu.my](mailto:fathiyah.jamaludin@utp.edu.my).

Day to day program

**Day 1 – Monday, 15th August 2022**

Summer School Opening Day

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|  | **-** | | **UTP Campus** | **Logo  Description automatically generated** |  |  |
| *№* | *Time* | *Format, Lecture room* | *Event* | | | |
| 1. | 10.00-10.10 | Undercroft – 80pax | Opening speech – Institute Director | | | |
| 2. | 10.10-10.30 |  | Introductory speech – Deputy Vice Chancellor Research & Innovation | | | |
| 3. | 10.30-10.50 |  | Welcoming speech – Vice Chancellor  Photo session with the VC | | | |
| 4. | 11.00 – 11.20 |  | Official Opening of Summer School 2022 by MARE Project leadership *- Dr. , Dr.* *Yildiray Ogurol, Dr. Igor Novopashenny* | | | |
| 5. | 11.20 – 12.00 |  | Introduction of Summer School participants. | | | |
| 6. | 12.00 – 13.00 |  | Program and organizational arrangements.  Briefing of Programme | | | |
| 7. | 13.00 – 14.00 | Lunch | | | | |
| 8. | 14.00 -15.00 |  | **Lecture: Prof. Kalev Sepp,** Estonian University of Life Sciences  Introduction: global and regional sustainability – from policy concepts to the management action | | | |
|  | 15.00 -17.30 | Chancellor Complex & CETaL | UTP Campus Tour & CETaL  Laboratory Visit to  1. Civil Engineering Department (Wave tank facility)  2. Sedimentology Lab-Rock Physics Lab Visualization Lab (for subsurface data-seismic, well) at CSI and SEACaRL | | | |

**Day 2 – Tuesday, 16th August 2022**

Plenary and parallel sessions

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| *№* | *Time* | *Format, Lecture room* | *Event* |  |
| 1. | 9.00 -11.00 | Plenary session | **Lecture:** **Dr. Holger Auel**, University of Bremen:  Marine Productivity, Food Webs, and Strategies for a Sustainable Use of Marine Living Resources | |
| 2. | 11.00-13.00 | Parallel sessions | **Lecture: Dr Muhammad Hafeez Jeofry,** Universiti Malaysia Terengganu  Title: Sea level rise from ice-sheet melting using CMIP6 model: Impact for Marine Sustainability | **Lecture: Siiri Külm**, Estonian University of Life Sciences  Data integration and participatory process in developing integrated coastal zone management (ICZM). Example of the Eastern Baltic Sea |
| 3. | 13.00 – 15.00 | **Lunch** | | |
| 4. | 15.00 – 17.00 | Parallel sessions | **Lecture: Dr Shamila Azman,** Universiti Teknologi Malaysia  Title: Coastal Wetlands and Mangroves | **Practical exercise: Siiri Külm, Lagle Lõhmus,** Mapping Ecosystem Services of Coastal areas. Ecosystem services matrix – expert evaluation. Ecosystem Services hot and cold spots |

**Day 3 – Wednesday, 17th August 2022**

Educational Trip to UniKL – MIMET, Lumut

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| *№* | *Time* | *Format, Lecture room* | *Event* |
|  | 8.30 | Bus for 71 pax | Educational Trip to UniKL – MIMET, Lumut |
|  |  |  | Lunch |
|  |  |  | Dinner hosted by UniKl  Return to UTP |

**Day 4 – Thursday, 18th August 2022**

Plenary and parallel sessions

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| *№* | *Time* | *Lecture room* | *Event* |  |
| 1. | 9.00 -11.00 | Plenary session | **Lecture:** **Prof. Kalev Sepp,** Estonian University of Life Sciences  Ecosystem Service concept. Methods for mapping and assessment of ecosystem services. ES concept in Environmental Policy (implications for coastal spatial planning and management) | |
| 2. | 11.00-13.00 | Plenary session | PETRONAS Talk (TBC date) | **Practical exercise: Dr. Anne Kull,** Estonian University of Life Sciences  Defining Ecosystem services of Coastal areas (carbon storage and sequestration, etc,) using QGIS  *(beginning)* |
| 3. | 13.00 – 15.00 | Lunch | | | |
|  | 15.00 – 17.00 | Parallel sessions | **Practical exercise: Dr. Daniele La Rosa,** University of Catania  Positive effects of trees on climate regulation, carbon sequestration and noise reduction | **Practical exercise: Dr. Anne Kull,** Estonian University of Life Sciences  Defining Ecosystem services of Coastal areas (carbon storage and sequestration, etc,) using QGIS  *(continued)* |

**Day 5 – Friday, 19th August 2022**

Plenary and parallel sessions

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| *№* | *Time* | *Lecture room* | *Event* |  |
| 1. | 9.00 -11.00 | Plenary session | **Lecture: Dr. Vincenzo Maccarrone,** Institute for Marine Biological Resources and Biotechnology of the Italian National Research Lecture : Council – (IRBIM-CNR)  Anthropocene speaks: impact on the coastal areas | |
| 2. | 11.00-13.00 | Parallel sessions | **Lecture: Dr Teh Hee Min,** Universiti Teknologi PETRONAS  Title: Coastal Structures | **Lecture: Dr Siti Nur Fathiyah,** Universiti Teknologi PETRONAS  Title: Delta Environment and Hydrocarbon Potential: Present-day Analogue |
| 3. | 13.00 – 15.00 | Lunch (and Friday prayer for Muslims) | | |
| 4. | 15.00 – 17.00 |  | **Lecture: Dr. Pietro Scandura,** University of Catania  Hydromorphodynamics of the coastal area | **Lecture:** an overview of Mekong delta (TBC) |

**Day 6 – Saturday, 20th August 2022**

Educational Fieldwork & Site visits to Seri Tanjung Pinang 2, Tg. Tokong, Penang

Aim: Familiarize with the construction technologies used for coastal reclamation (a dedicated leaflet for the trip tba)

**Day 7 – Sunday, 21st August 2022**

Educational Fieldwork & Site visits to Seri Tanjung Pinang 2, Tg. Tokong, Penang (cont)

Aim: Determine the environmental impacts caused by the reclamation operations and the control measures (a dedicated leaflet for the trip tba)

**Day 8 – Monday, 22nd August 2022**

at UniKL

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| *№* | *Time* | *Format, Lecture room* | *Event* |
| 1. | 10.00 – 11.00 | *Lecture, TBC* | UniKL MIMET’s Presentation |
| 2. | 11.00 – 13.00 | *Lecture, TBC* | Asia Marine Design Centre (AMDeC)  Marginal Oil Field Platform: Is it sustainable |
| 3. | 13.00 – 14.00 | Lunch | |
| 4. | 14.00 – 17.00 | *Lecture, TBC* | Dr Mohd Redzuan Zoolfakar  Green Ship: What will the future hold |
| 5. | 17.00 |  | Return to UTP |

**Day 9 -Tuesday, 23rd August 2022**

at UniKL

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| *№* | *Time* | *Format, Lecture room* | *Event* |
| 1. | 10.00 – 13.00 | *Lecture* | VALE Mineral Malaysia S/B  Socio-economy vs Sustainability Plan |
| 2. | 13.00 – 14.00 | Lunch | |
| 3. | 14.00 – 17.00 | *Lecture* | VALE Mineral Malaysia S/B  Remain sustainable yet dear to community’s heart |
| 4. | 17.00 |  | Return to UTP |

**Day 10 – Wednesday, 24th August 2022**

at UniKL

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| *№* | *Time* | *Format, Lecture room* | *Event* | |
| 1. | 10.00 – 13.00 | *Lecture* | Lumut Port  Facing the future | |
| 2. | 13.00 – 14.00 | Lunch | | |
| 3. | 14.00 – 17.00 | *Lecture* | Lumut Port  Green Port |
| 4. | 17.00 |  | Return to UTP | |

**Day 11 – Thursday, 25th August 2022**

at UniKL

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| *№* | *Time* | *Format, Lecture room* | *Event* |
| 1. | 10.00 – 13.00 | *Lecture* | Lecture: UniKL Maritime Management Section  Supply chain and logistic demand: How to remain sustainable |
| 2. | 13.00 – 14.00 |  | Lunch |
| 3. | 14.00 – 17.00 | *Lecture* | Lecture: UniKL MICET  Sustaining coastal enviroment ecosystem |
| 4. | 17.00 |  | Return to UTP |

**Day 12 – Friday, 26th August 2022**

at UniKL

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| *№* | *Time* | | *Lecture room* | *Event* |
| 1. | 10.00 -13.00 | *Lecture and discussion* | | Educational talk by local authorities / NGO (TBC) |
| 2. | 13.00 – 15.00 | Lunch (and Friday Prayer for Muslims) | | |
| 3. | 15.00 - 17.00 | *Lecture* | | Meeting with VALE’s representative (TBC) |
| 4. | 17.00 |  | | Return to UTP |

**Day 13 – Saturday, 27th August 2022**

Educational Visit to Tin Mine Cavern (Gua Tempurung)

Aim: Exposing students to the marine environment (shallow water) that was formed thousands of years ago and has been now exposed inshore.

**Day 14 – Sunday, 28th August 2022**

**Educational Visit to TT5: Tin Dredge Mining**

**Aim: Exposing students on management of tin mines within Malaysia: impact to delta sustainability**

**Day 15 – Monday, 29th August 2022)**

**Day of Departure**

Information about School organisers

The School **COME! COSTAL AND MARINE SUSTAINABILITY ENACTED** is co-organised and co-funded by a consortium of international partners financed by the **CBHE projects MARE** - *Marine Coastal and Delta Sustainability for Southeast Asia* by the EU Erasmus+ programme (<https://mare-project.net>): Universiti Teknologi PETRONAS & Universiti Kuala Lumpur (Malaysia). The organization is supported by Erda RTE CV (the Netherlands, <http://erda-rte.eu/>), Estonian University of Life Sciences (Estonia), University of Catania (Italy), IRBIM-CNR (Italy), and University of Bremen (Germany).

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